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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER	
DOTE, JANIS L	

ART UNIT	PAPER NUMBER
1756	

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/082,089	TAKAYANAGI ET AL.	
	Examiner	Art Unit	
	Janis L. Dote	1756	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *01 December 2004*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *8,13 and 18-20* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *8,13,19 and 20* is/are rejected.

7)☒ Claim(s) *18* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicants' submission filed on Dec. 01, 2004, has been entered.

2. The examiner acknowledges the cancellation of claims 12 and 14-17, the amendment to claim 8, and the addition of claims 18-20, filed in the amendment on Dec. 01, 2004. Claims 8, 13, and 18-20 are pending.

3. The rejections of claims 8 and 12-17 under 35 U.S.C. 112, second paragraph, set forth in the office action mailed on Sep. 9, 2004, paragraph 5, have been withdrawn in response to the amendments to claim 8 and the cancellation of claims 12 and 14-17, filed in the amendment on Dec. 01, 2004.

The rejections of claims 14-17 under 35 U.S.C. 103(a) over the cited prior art, and under the judicially created doctrine of obviousness-type double patenting over claims 1, 2, 5-7, 9-11, 24, and 25 of copending Application No. 09/791,860 in view

of Japanese Patent 2000-81734, set forth in the office action mailed on Sep. 9, 2004, paragraphs 8, 9, and 17, respectively, have been mooted by the cancellation of claims 14-17, filed in the amendment on Dec. 01, 2004.

The terminal disclaimer filed on Dec. 01, 2004, disclaiming the terminal portion of any patent granted on this application which would extend beyond the expiration date of U.S. Application serial no. 09/791,860, which issued as US Patent No. 6,821,697, on Nov. 23, 2004, has been reviewed and is accepted. The terminal disclaimer has been recorded. Accordingly, the rejections of claims 8, 12, and 13 under the judicially created doctrine of obviousness-type double patenting over claims 1, 2, 5-7, 9-11, 24, and 25 of copending Application No. 09/791,860 in view of the other cited references, set forth in the office action mailed on Sep. 9, 2004, paragraph 16, have been withdrawn.

4. The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

5. Claims 19 and 20 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claims contain subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Instant claim 19 recites that the mixing of the resin solution with an aqueous medium in the presence of a base and a phase inversion accelerator is a "process of adding dropwise water while stirring at a circumferential speed within a range of 0.2-5 m/second."

Instant claim 20 recites that the mixing of the resin solution with an aqueous medium in the presence of a base and a phase inversion accelerator is a "process of adding dropwise water while stirring employing a stirrer, an anchor blade, a turbine blade, a faudler blade, a full-zone blade, a max blend blade, or a semicircular blade."

The originally filed specification does not provide an adequate written description of the process of adding dropwise water while stirring as recited in instant claims 19 and 20. The originally filed specification at page 38, lines 12-16, discloses a "method of adding dropwise water while stirring at

low shear employing a stirrer, an anchor blade, a turbine blade, a faudler blade, a full-zone blade, a max blend blade, or a semicircular blade or the like at a circumferential speed within a range of 0.2-5 m/second" (emphasis added). Instant claims 19 and 20 do not recite that the stirring in the processes of adding dropwise water is "at low shear." The processes of adding dropwise water recited in instant claims 19 and 20 are broader than the disclosed process in the originally filed specification, because they include stirring not "at low shear," such as stirring "at high shear."

6. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

7. Claims 8 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over US 6,265,125 B1 (Anno), as evidenced by Japanese Patent 2000-81734 (JP'734), combined with US 5,079,123 (Nanya) and US 6,183,924 B1 (Nomura). See the DERWENT translation of JP'734 for cites.

Anno discloses a magenta toner comprising spherical toner particles having a roundness of 0.986. See Table 3 at col. 20, toner N. The toner particles comprise a polypropylene wax as the anti-offset agent and polyester binder resin B, which has a

carboxyl group and an acid value of 24.9 mg KOH/g, as the binder resin, wherein the magenta pigment C.I. Pigment Red 184 is dispersed therein. Table 2 at col. 15, polyester resin B; col. 16, lines 50-51; and col. 18, lines 26-47. The Anno polyester binder resin B meets the polyester resin having carboxyl group limitation recited in instant claim 8. C.I. Pigment Red 184 is identified by JP'734 as comprising two naphthol azo pigments that are within the compositional limitations of formula (1) recited in instant claim 8. Moreover, magenta pigment C.I. Pigment Red 184 also meets the compositional limitations of formulas (2) and (5) recited in instant claim 13. See JP'734 and the translation, paragraph 0154. Anno discloses that its toner can be used in processes to provide full-color images with no fogging. See col. 20, lines 53-54; and Table 4 at col. 23, example 2.

Anno does not exemplify a magenta toner comprising a carnauba wax as recited in instant claim 8. However, Anno discloses that the anti-offset agent can equally be a carnauba wax. Col. 9, lines 60-63.

Nanya discloses that toners comprising low molecular weight polyethylenes or polypropylenes can impart high resistance to the off-set phenomena but cannot sufficiently improve the fixing ability at low temperature." Col. 1, lines 55-60. Nanya also

discloses that toners comprising carnauba wax as a release agent have both high resistance to the off-set phenomenon and excellent fixing ability at low temperatures. Nanya, col. 1, lines 61-63. However, the toners do not have high resistance to the winding phenomenon and cause toner filming. Nanya, col. 1, lines 64-65, and col. 2, line 7. Nanya discloses that carnauba wax, which comprises generally from 3 to 4 wt% of free aliphatic acids, cannot be thoroughly dispersed in the toner binder resin. Therefore, the wax tends to separate from the toner during the development process. Nanya, col. 2, lines 3-7, and 38-39. Nanya discloses that a carnauba wax "substantially free of aliphatic acids" overcomes the above problems. See Nanya, carnauba wax B in example 2 of Nanya, which comprises 0.7 wt% of free aliphatic acids. Nanya discloses that due to the removal of the aliphatic acids, the size of the wax crystal decreases to 1 μm or less, when dispersed in the binder resin, which is much smaller than that of conventional carnauba wax. Nanya discloses that for this reason a toner comprising the carnauba wax substantially free of aliphatic acids is free from the previously-mentioned filming problems, and exhibits high resistance to both off-set and winding phenomena. Col. 2, lines 46-57.

It would have been obvious for a person having ordinary skill in the art, in view of the teachings of Anno and Nanya, to use carnauba wax B taught by Nanya as the anti-offset agent in the toner N disclosed by Anno, because that person would have had a reasonable expectation of successfully obtaining a toner that exhibits improved resistance to off-set, winding phenomena, and filming.

Anno does not disclose making its toner by the steps recited in instant claims 8 and 13. However, Anno discloses that its toner can be obtained by an emulsion dispersion granulation method. Col. 5, line 65.

Nomura discloses an emulsion dispersion granulation method which provides toner particles having a degree of roundness of not less than 0.97. Col. 4, lines 5-12. Nomura's method comprises the steps of: (1) dissolving or dispersing a binder resin in an organic solvent and adding a colorant and additives, such as a wax, to form a mixture; (2) mixing and emulsifying the mixture of step (1) with an aqueous medium in the presence of a base and "isopropyl alcohol" to cause a phase inversion emulsification to form spherical particles; (3) separating the spherical particles from the aqueous medium; and (4) drying the separated particles. Col. 9, line 44, to col. 10, line 37;

col. 12, line 59, to col. 13, line 7; and toner preparation example 1 at col. 19.

Isopropyl alcohol meets the isopropanol compound recited in instant claim 8 that is identified as a phase inversion accelerator. Although Nomura does not explicitly identify isopropyl alcohol is a phase inversion accelerator, Nomura clearly teaches that its emulsifying step causes phase inversion emulsification. Hence, Nomura's isopropyl alcohol appears to be a phase inversion accelerator. The burden is on applicants to prove otherwise. In re Fitzgerald, 205 USPQ 594 (CCPA 1980).

Nomura teaches that the binder resin can be a polyester resin having an acid value of 1 to 30. Col. 12, lines 20-21. As discussed supra, Anno's polyester binder resin B has an acid value of 24.9 mg KOH/g of binder resin. Nomura's method meets the steps of making a spherical toner as recited in instant claims 8 and 13, but for the particular magenta pigment of formula (1) recited in instant claims 8 and 13, and the carnauba wax recited in instant claim 8. However, as discussed supra, Anno teaches a spherical toner comprising magenta pigment C.I. Pigment Red 184 that meets the compositional limitations of formula (1) recited in instant claim 8 and the compositional limitations of formulas (2) and (5) recited in instant claim 13. As discussed supra, the combined teachings in Anno and Nanya

render obvious a spherical toner comprising a carnauba wax that meets the releasant compositional limitation recited in instant claim 8. Nomura discloses that its method provides toners where the additives, such as colorants and a wax, are dispersed and encapsulated. According to Nomura, when additives such as colorants are present on the surface of the toner particles, the triboelectricity of the toner is reduced. Col. 6, lines 46-52; and col. 12, line 62, to col. 13, line 7. Nomura also discloses that its emulsification process has the advantages over a pulverization process (the process exemplified in Anno) of greater ease of production and lower cost. Col. 7, lines 3-5. Nomura further discloses that its process easily provides toners with a sharp particle distribution which results in improved image quality. Col. 7, lines 11-13.

It would have been obvious for a person having ordinary skill in the art, in view of the teachings of Anno and Nomura, to make the toner rendered obvious over the combined teachings in Anno and Nanya by the emulsion dispersion granulation method disclosed by Nomura, such that the resultant toner has the roundness required by both Anno and Nomura, because that person would have had a reasonable expectation of successfully obtaining a magenta toner having the benefits disclosed by Anno and Nomura.

8. Claims 8 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Anno combined with Nanya, US 2002/0037466 A1 (Kanbayashi), and Nomura.

The combined teachings of Anno and Nanya render obvious a magenta toner comprising spherical toner particles as described in paragraph 7 above, which is incorporated herein by reference.

Anno does not exemplify a magenta toner comprising a magenta organic pigment represented by chemical formulas (4) or (7), as recited in instant claim 13. However, Anno does not limit the type of magenta pigment used. Anno discloses that the "various known colorants, such as magenta color . . . may be used." Col. 9, lines 6-8. Anno discloses that magenta colorants may include, in addition to C.I. Pigment Red 184, C.I. Pigment Red 31. Col. 9, line 11.

Kanbayashi discloses that magenta toners having a good hue can be provided when a compound represented by formula (1) and a compound of formula (3) are mixed and uniformly dispersed in the toner. Paragraph 0072-0075 and 0077-0078. According to Kanbayashi, the mixture comprising the compound of formula (1) and the compound of formula (3) provides magenta toners having the color tone of magenta in ink processes, and having good light-fastness. Paragraph 0076 and 0086. Kanbayashi discloses

that the compound of formula (1) may preferably be represented by compounds of formulas (1-3) and (1-4). According to Kanbayashi, "[t]his is preferable in view of the color tone control, stabilization of charge and so forth." Paragraphs 0087-0088. Formulas (1-3) and (1-4) are within the compositional limitations of formula (1) recited in instant claim 8. Moreover, formulas (1-3) and (1-4) have the identical chemical structures as the organic pigments of formulas (4) and (7), respectively, recited in instant claim 13.

It would have been obvious for a person having ordinary skill in the art, in view of the teachings of Kanbayashi, to use Kanbayashi's mixture comprising the compound of formula (3) and the compound represented by formulas (1-3) or (1-4), as the magenta pigment in the toner rendered obvious over the combined teachings of Anno and Nanya, because that person would have had a reasonable expectation of successfully obtaining a magenta toner having good hue and light-fastness as taught by Kanbayashi.

Anno does not disclose making its toner by the steps recited in instant claims 8 and 13. However, Anno discloses that its toner can be obtained by an emulsion dispersion granulation method. Col. 5, line 65.

Nomura discloses an emulsion dispersion granulation method which provides toner particles having a degree of roundness of not less than 0.97. Nomura's method meets the steps of making a spherical toner as recited in instant claims 8 and 13, but for the particular magenta pigment recited in instant claims 8 and 13, and the carnauba wax recited in instant claim 8. However, as discussed supra, the combined teachings in Anno, Nanya, and Kanbayashi render obvious a spherical toner comprising a magenta pigment of formulas (4) or (7) recited in instant claim 13, and a carnauba wax that meets the releasant compositional limitation recited in instant claim 8. The discussions of Nomura, Anno, and Nanya in paragraph 7 above are incorporated herein by reference.

It would have been obvious for a person having ordinary skill in the art, in view of the teachings of Anno and Nomura, to make the toner rendered obvious over the combined teachings in Anno, Nanya, and Kanbayashi by the emulsion dispersion granulation method disclosed by Nomura, such that the resultant toner has the roundness required by both Anno and Nomura, because that person would have had a reasonable expectation of successfully obtaining a magenta toner having the benefits disclosed by Anno and Nomura.

9. Claims 8 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Anno combined with Nanya, Japanese Patent 2000-81734 (JP'734), and Nomura. See the DERWENT translation of JP'734 for cites.

Anno combined with Nanya renders obvious a magenta toner comprising spherical toner particles, as described in paragraph 7 above, which is incorporated here by reference.

Anno does not exemplify a magenta toner comprising a magenta organic pigment represented by formula (4) as recited in instant claim 13. However, Anno does not limit the type of magenta pigment used. Anno discloses that the "various known colorants, such as magenta color . . . may be used." Col. 9, lines 6-8. Anno discloses that magenta colorants may include, in addition to C.I. Pigment Red 184, C.I. Pigment Red 31. Col. 9, line 11.

JP'734 discloses a magenta toner that has high coloring power, colorfulness, and brightness. The toner comprises a polyester resin having an acid value of 2 to 25 mg KOH/g and a magenta colorant represented by the formula (I), such as C.I. Pigment Red 31 and C.I. Pigment Red 184. Translation, paragraphs 0031-0032, example 6 in paragraphs 0151-0152, and example 7 in paragraphs 0153 and 0154. The colorant C.I. Pigment Red 31 is within the compositional limitations of

formula (1) recited in instant claim 8; and has the identical chemical structure as the organic pigment of formula (4) recited in instant claim 13. As discussed in paragraph 7 above, Anno's magenta toner comprises a polyester having an acid value of 24.9 mg KOH/g and the magenta pigment C.I. Pigment Red 184. The toner polyester resin taught by Anno is within the polyester limitation disclosed by JP'734. JP'734 shows that magenta toners comprising the magenta colorant C.I. Pigment Red 184 and toners comprising the colorant C.I. Pigment Red 31 provide similar results in color reproduction, light resistance, OHP (overhead projection) transparency, image density, and charge stability. See Table 2, examples 6 and 7 (second and third rows from the bottom), and the accompanying text.

According to JP'734, when the toner comprises the magenta colorant of formula (I), the toner has an "effect remarkable in electrical charging stabilization of a color toner." Translation, paragraph 0034. The toner also has excellent light resistance. Translation, paragraphs 0041 and 0043, example 6 in Table 2, and the accompanying text. JP'734 discloses that the magenta colorant of formula (I) shows the "color phase shifted to red tinge." Thus, the magenta toner has the "spectrum property desirable as a magenta toner for the full-color image formation." Translation, paragraph 0046.

It would have been obvious for a person having ordinary skill in the art, in view of the teachings of JP'734, to use the equivalent magenta colorant C.I. Pigment Red 31, as the magenta pigment in the toner rendered obvious over the combined teachings in Anno and Nanya, because that person would have had a reasonable expectation of successfully obtaining a magenta toner having good hue, light-fastness, and coloring power as taught by JP'734.

Anno does not disclose making its toner by the steps recited in instant claims 8 and 13. However, Anno discloses that its toner can be obtained by an emulsion dispersion granulation method. Col. 5, line 65.

Nomura discloses an emulsion dispersion granulation method which provides toner particles having a degree of roundness of not less than 0.97. Nomura's method meets the steps of making a spherical toner as recited in instant claims 8 and 13, but for the particular magenta pigment of formula (1) recited in instant claims 8 and 13, and the carnauba wax recited in instant claim 8. However, as discussed supra, the combined teachings in Anno, Nanya, and JP'734 render obvious a spherical toner comprising a magenta pigment of formula (4) recited in instant claim 13, and a carnauba wax that meets the releasant compositional limitation recited in instant claim 8. The

discussions of Nomura, Anno, and Nanya in paragraph 7 above are incorporated herein by reference.

It would have been obvious for a person having ordinary skill in the art, in view of the teachings of Anno and Nomura, to make the toner rendered obvious over the combined teachings of in Anno, Nanya, and JP'734 by the emulsion dispersion granulation method disclosed by Nomura, such that the resultant toner has the roundness required by both Anno and Nomura, because that person would have had a reasonable expectation of successfully obtaining a magenta toner having the benefits disclosed by Anno and Nomura.

10. Claims 8 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Anno combined with Nanya, US 2002/0058193 A1 (Tosaka), as evidenced by the ACS File Registry Nos. 56396-10-2, 6448-96-0, and 12225-06-8, and Nomura.

Anno combined with Nanya renders obvious a magenta toner comprising spherical toner particles, as described in paragraph 7 above, which is incorporated here by reference.

Anno does not exemplify a magenta toner comprising a magenta organic pigment represented by formulas (3), (4), or (6), as recited in instant claim 13. However, Anno does not limit the type of magenta pigment used. Anno discloses that the

"various known colorants, such as magenta color . . . may be used." Col. 9, lines 6-8. Anno discloses that magenta colorants may include, in addition to C.I. Pigment Red 184, C.I. Pigment Red 31. Col. 9, line 11.

Tosaka discloses monoazo pigment compositions comprising a monoazo pigment of a specified structure and specified amounts of a β-naphthol compound of formula (2) and an aromatic amine of formula (3). Paragraphs 0046-0057. Tosaka teaches that the monoazo pigment of a specified structure may include C.I. Pigment Red 31, 150, 176, and 184, preferably C.I. Pigment Red 31, 150, and 176. Paragraphs 0080-0081, Table 1-1 at page 25, production examples 1-1 through 1-8, and Table 1-2 at page 26, toners 1-6 through 1-8. The ACS File Registry Nos. 6448-96-0, 56396-10-2, and 12225-06-8, respectively identify C.I. Pigment Red 31, 150, and 176 as having the identical chemical structures as the organic pigments of formulas (4), (3), and (6), respectively, recited in instant claim 13. Tosaka discloses that magenta toners that comprise its monoazo pigment compositions have excellent color reproducibility, "gradation characteristic," light-fastness, and chargeability. Paragraph 0039, and Table 1-3 at page 27, toners 1-6 through 1-8. The magenta toners are capable of forming a fixed image with excellent transparency.

Paragraph 0042. According to Tosaka, the magenta toners are also capable of providing high quality full-color images with excellent color reproducibility. Paragraph 0041.

It would have been obvious for a person having ordinary skill in the art, in view of the teachings of Tosaka, to use Tosaka's monoazo pigment composition as the magenta pigment in the toner rendered obvious over the combined teachings in Anno and Nanya, because that person would have had a reasonable expectation of successfully obtaining a magenta toner having the benefits disclosed by Tosaka.

Anno does not disclose making its toner by the steps recited in instant claims 8 and 13. However, Anno discloses that its toner can be obtained by an emulsion dispersion granulation method. Col. 5, line 65.

Nomura discloses an emulsion dispersion granulation method which provides toner particles having a degree of roundness of not less than 0.97. Nomura's method meets the steps of making a spherical toner as recited in instant claims 8 and 13, but for the particular magenta pigment of formula (1) recited in instant claim 8, and the carnauba wax recited in instant claim 8. However, as discussed supra, the combined teachings in Anno, Nanya, and Tosaka render obvious a spherical toner comprising a magenta pigment of formulas (3), (4), or (6) recited in instant

claim 13, and a carnauba wax that meets the releasant compositional limitation recited in instant claim 8. The discussions of Nomura, Anno, and Nanya in paragraph 7 above are incorporated herein by reference.

It would have been obvious for a person having ordinary skill in the art, in view of the teachings of Anno and Nomura, to make the toner rendered obvious over the combined teachings in Anno, Nanya, and Tosaka by the emulsion dispersion granulation method disclosed by Nomura, such that the resultant toner has the roundness required by both Anno and Nomura, because that person would have had a reasonable expectation of successfully obtaining a magenta toner having the benefits disclosed by Anno and Nomura.

11. Applicants' arguments filed on Dec. 1, 2004, with respect to the rejections over Anno combined with Nomura set forth in paragraphs 7-10 above have been fully considered but they are not persuasive.

Applicants assert that neither Anno nor Nomura discloses a "method including the process of adding wax with the mixing process of phase inversion accelerator"

However, as discussed in the rejection in paragraph 7, Anno discloses that its toner may comprise carnauba wax as the anti-

offset agent and that the toner may be obtained from an emulsion dispersion granulation method. Nanya discloses the use of a particular carnauba wax in toners and the benefits of using said carnauba wax. Nomura discloses an emulsion dispersion granulation method, and the benefits of making toners with said method. The Nomura method comprises the steps of forming a mixture comprising a binder resin dissolved in an organic solvent, wherein a colorant and a wax are added to the binder resin solution, and emulsifying the resultant mixture with an aqueous medium in the presence of a base and isopropyl alcohol to "cause phase inversion emulsification" to form resin particles. As explained in the rejection in paragraph 7 above, Nomura's isopropyl alcohol appears to be a phase inversion accelerator. The burden is on applicants to prove otherwise.

Accordingly, the rejections of claims 8 and 13 over the combined teachings of Anno, Nanya, and Nomura, alone or combined with the other cited references, stand.

12. The following rejections set forth in paragraphs 13-15, infra, are under 35 U.S.C. 103(a) over US 6,821,697 B2 (Takayanagi), which has a common inventor with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art only under 35 U.S.C.

102(e). These rejections under 35 U.S.C. 103(a) might be overcome by: (1) a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not an invention "by another"; (2) a showing of a date of invention for the claimed subject matter of the application which corresponds to subject matter disclosed but not claimed in the reference, prior to the effective U.S. filing date of the reference under 37 CFR 1.131; or (3) an oath or declaration under 37 CFR 1.130 stating that the application and reference are currently owned by the same party and that the inventor named in the application is the prior inventor under 35 U.S.C. 104, together with a terminal disclaimer in accordance with 37 CFR 1.321(c). For applications filed on or after November 29, 1999, this rejection might also be overcome by showing that the subject matter of the reference and the claimed invention were, at the time the invention was made, owned by the same person or subject to an obligation of assignment to the same person. See MPEP § 706.02(l)(1) and § 706.02(l)(2).

13. Claims 8, 13, 19, and 20 are rejected under 35 U.S.C. 103(a) as being obvious over US 6,821,697 B2 (Takayanagi) combined with Kanbayashi.

Takayanagi discloses a method of making spherical dry color toner that meets the steps recited in the instant claims, but for the particular magenta pigment of formula (1) recited in instant claims 8 and 13. The method disclosed by Takayanagi comprises the steps of: (1) dissolving or dispersing the polyester resin R1 and polyester resin R4, which have a carboxyl group and an acid number of 6.7 mg KOH/g and 10 mg KOH/g, respectively, in an organic solvent, adding a colorant and the releasant carnauba wax to form a resin mixture; (2) mixing and emulsifying the resin mixture of step (1) with an aqueous medium in the presence of a base and the phase inversion accelerator isopropyl alcohol, wherein water is added dropwise while stirring at a peripheral speed of 1.05 m/second to cause a phase inversion emulsification to form spherical particles; (3) separating the spherical particles from the aqueous medium; and (4) drying the separated particles. The resulting spherical dry color toner has an average roundness of 0.979. See col. 24, lines 10-40; and Table 8 at col. 26, example 15. Also see Table 1 at cols. 21-22, polyester resin R1 and polyester resin R4; Table 6 at col. 23, mill base MB16; and col. 24, lines 3-4. The polyester resins R1 and R4 and carnauba wax meet the binder resin and releasant compositional limitations recited in instant claim 8. The stirring in step (2) at a peripheral

speed of 1.05 m/second meets the process limitations recited in instant claim 19. Takayanagi also teaches that said stirring in step (2) is at low shear employing a stirrer, an anchor blade, a turbine blade, FAUDLER blade, FULL ZONE blade, MAX BLEND blade or a semicircular blade, which meets the process limitation recited in instant claim 20. Col. 17, lines 33-41.

As discussed supra, the process disclosed by Takayanagi does not use particular magenta pigment of formula (1) recited in instant claims 8 and 13. However, Takayanagi does not limit the type of colorant used. Takayanagi discloses that the "colorant employed in the toner . . . is not specifically limited, and conventionally known colorants can be employed." Col. 12, lines 54-57.

Kanbayashi discloses that magenta toners having a good hue can be provided when a compound represented by formula (3) and a compound of formulas (1-3) or (1-4) are mixed and uniformly dispersed in the toner. Formulas (1-3) and (1-4) have identical chemical structures as the organic pigments of formulas (4) and (7), respectively, recited in instant claim 13. The discussion of Kanbayashi in paragraph 8 above is incorporated herein by reference.

It would have been obvious for a person having ordinary skill in the art to use the magenta colorant disclosed by

Kanbayashi as the colorant in the method of making the spherical toner disclosed by Takayanagi, because that person would have had a reasonable expectation of successfully obtaining a magenta toner having the benefits disclosed Kanbayashi.

14. Claims 8, 13, 19, and 20 are rejected under 35 U.S.C. 103(a) as being obvious over Takayanagi combined with JP'734. See the DERWENT translation of JP'734 for cites.

Takayanagi discloses a method of making spherical dry color toner as described in paragraph 13 above, which is incorporated herein by reference.

As discussed in paragraph 13 above, the process disclosed by Takayanagi does not use particular magenta pigment of formula (1) recited in instant claims 8 and 13. However, Takayanagi does not limit the type of colorant used. Takayanagi discloses that the "colorant employed in the toner . . . is not specifically limited, and conventionally known colorants can be employed." Col. 12, lines 54-57.

JP'734 discloses a magenta toner that has high coloring power, colorfulness, and brightness. Translation, paragraph 0027. The toner comprises a polyester resin having an acid value of 2 to 25 mg KOH/g and a magenta colorant represented by the formula (I), such as C.I. Pigment Red 31 and

C.I. Pigment Red 184. Translation, paragraphs 0031-0032, example 6 in paragraphs 0151-0152, and example 7 in paragraphs 0153 and 0154. The colorant C.I. Pigment Red 31 is within the compositional limitations of formula (1) recited in instant claim 8; and has the identical chemical structure as the organic pigment of formula (4) recited in instant claim 13. As discussed in paragraph 13 above, the Takayanagi polyester resins R1 and R4 have an acid value of 6.7 mg KOH/g and 10 mg KOH/g, respectively. The toner polyester resins taught by Takayanagi are within the polyester limitation disclosed by JP'734.

JP'734 shows that magenta toners comprising the magenta colorant C.I. Pigment Red 31 provide good results in color reproduction, light resistance, OHP (overhead projection) transparency, image density, and charge stability. See Table 2, example 7 (second and third rows from the bottom), and the accompanying text. According to JP'734, when the toner comprises the magenta colorant of formula (I), the toner has an "effect remarkable in electrical charging stabilization of a color toner." Translation, paragraph 0034. The toner also has excellent light resistance. Translation, paragraphs 0041 and 0043, example 6 in Table 2, and the accompanying text. JP'734 discloses that the magenta colorant of formula (I) shows

the "color phase shifted to red tinge." Thus, the magenta toner has the "spectrum property desirable as a magenta toner for the full-color image formation." Translation, paragraph 0046.

It would have been obvious for a person having ordinary skill in the art, in view of the teachings of JP'734, to use the magenta colorant C.I. Pigment Red 31 as the colorant in the method of making the spherical toner disclosed by Takayanagi, because that person would have had a reasonable expectation of successfully obtaining a magenta toner having good hue, light-fastness, and coloring power as taught by JP'734.

15. Claims 8, 13, 19, and 20 are rejected under 35 U.S.C. 103(a) as being obvious over Takayanagi combined with Tosaka, as evidenced by the ACS File Registry Nos. 6448-96-0, 56396-10-2, and 12225-06-8.

Takayanagi discloses a method of making spherical dry color toner as described in paragraph 13 above, which is incorporated herein by reference.

As discussed in paragraph 13 above, the process disclosed by Takayanagi does not use particular magenta pigment of formula (1) recited in instant claims 8 and 13. However, Takayanagi does not limit the type of colorant used. Takayanagi discloses that the "colorant employed in the toner . . . is not

specifically limited, and conventionally known colorants can be employed." Col. 12, lines 54-57.

Tosaka discloses monoazo pigment compositions that have the identical chemical structures as the organic pigments of formulas (3), (4), and (6), respectively, recited in instant claim 13. The discussions of Tosaka and the ACS File Registry numbers in paragraph 10 above are incorporated herein by reference.

It would have been obvious for a person having ordinary skill in the art, in view of the teachings of Tosaka, to use Tosaka's monoazo pigment composition as the colorant in the method of making a spherical dry toner disclosed by Takayanagi, because that person would have had a reasonable expectation of successfully obtaining a magenta toner having the benefits disclosed by Tosaka.

16. Claim 18 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The prior art of record does not teach or suggest a method of making spherical dry toners comprising the magenta pigment of formula 8 recited in instant claim 18.

17. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Janis L. Dote whose telephone number is (571) 272-1382. The examiner can normally be reached Monday through Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mr. Mark Huff, can be reached on (571) 272-1385. The central fax phone number is (703) 872-9306.

Any inquiry regarding papers not received regarding this communication or earlier communications should be directed to Supervisory Application Examiner Ms. Claudia Sullivan, whose telephone number is (571) 272-1052.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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PRIMARY EXAMINER
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JLD
Jan. 7, 2005